DKT. 327-4

PUBLIC REDACTED VERSION

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11   **UNITED STATES DISTRICT COURT**
                NORTHERN DISTRICT OF CALIFORNIA
12   **SAN FRANCISCO DIVISION**

13 HUAWEI TECHNOLOGIES CO., LTD.,   Case No. 16-cv-02787-WHO
    HUAWEI DEVICE USA, INC., and
14 HUAWEI TECHNOLOGIES USA, INC.,

15   Plaintiffs / Counterclaim-Defendants,   **HUAWEI'S DAUBERT MOTION ON**
                                                  TECHNICAL ISSUES
16 v.

17 SAMSUNG ELECTRONICS CO., LTD.,
    SAMSUNG ELECTRONICS AMERICA,   Hearing Date: August 8, 2018
18 INC.,   Time: 2:00 PM
                                          Judge: Hon. William H. Orrick
19   Defendants / Counterclaim-Plaintiffs,

20   and   **UNREDACTED VERSION OF**
                                          DOCUMENT SOUGHT TO BE SEALED
21 SAMSUNG RESEARCH AMERICA,

22   Defendant,
    v.
23
    HISILICON TECHNOLOGIES CO., LTD.,
24
            Counterclaim-Defendant.
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1   Plaintiffs Huawei Technologies Co., Ltd., Huawei Device USA, Inc. and Huawei

2   Technologies USA, Inc. (collectively, "Huawei") hereby move pursuant to *Daubert v. Merrell Dow*

3   *Pharmaceuticals, Inc.*, 509 U.S. 579 (1993) to preclude Samsung's expert witnesses from offering

4   opinions that are contrary to the proper construction of claim terms, and the claim as a whole, in

5   Huawei patents 8,724,613 ("'613 patent"), 8,885,587 ("'587 patent"), 8,644,239 ("'239 patent"),

6   and 8,416,892 ("'892 patent"), and Samsung patents RE44,105 ("'105 patent"), 8,761,130 ("'130

7   patent"), 9,288,825 ("'825 patent"), and 8,619,726 ("'726 patent").

8   **I.   BACKGROUND**

9   This Court's Claim Construction Order, dated August 31, 2017, construed the ten "most

10   significant terms," as selected by the parties. (Dkt. 168).[1] For a number of terms not construed by

11   the Court, however, Samsung's expert witnesses apply improper constructions and offer opinions

12   based upon those improper constructions. In many instances, Samsung did not raise these claim

13   constructions issues in the parties Joint Claim Construction Statement (Dkt. 124) and, instead,

14   revealed these improper constructions for the first time in its experts' reports. Samsung's experts

15   should be precluded from offering opinions that are based on these improper constructions.

16   **II.   LEGAL STANDARDS**

17   Expert opinions "based on an impermissible claim construction" are improper and must be

18   excluded. *See Liquid Dynamics Corp. v. Vaughan Co.*, 449 F.3d 1209, 1224 n.2 (Fed. Cir. 2006)

19   (affirming district court's decision to "exclud[e] . . . expert opinion evidence as irrelevant because it

20   was based on an impermissible claim construction"); *France Telecom S.A. v. Marvell Semiconductor*

21   *Inc.*, No. 12-cv-04967-WHO, 2014 WL 4272771, at *5 (N.D. Cal. Aug. 28, 2014) (excluding

22   testimony of plaintiff's expert on the ground that it was "based on [plaintiffs] rejected construction of

23   'systematic convolutional coding'"); *Regents of Univ. of Cal. v. Micro Therapeutics, Inc.*, No. 03-cv-

24   05669-JW, 2007 WL 2429412, at *3 (N.D. Cal. Aug. 23, 2007) (striking portion of expert report that

25   "does not comply with the Court's construction of the phrase 'predetermined time period'").

26   Moreover, experts cannot argue claim construction to the jury, because claim construction is

27

28   [1] This Court, by Order dated March 1, 2018, reconsidered its construction of the phrase "first P=temporary Mobile Station Identity (P-TMSI) in an access message. (Dkt. 247).

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1   the province of the court. *See Fujifilm Corp. v. Motorola Mobility LLC*, No. 12-CV-03587-WHO,

2   2015 WL 1265009, at *6 (N.D. Cal. Mar. 19, 2015) (citing *MediaTek Inc. v. Freescale*

3   *Semiconductor, Inc.*, No. 11–cv–05341–YGR, 2014 WL 971765, at *1 (N.D. Cal. Mar. 5, 2014);

4   *Cordis Corp. v. Boston Sci. Corp.*, 561 F.3d 1319, 1337 (Fed. Cir. 2009) ("We have held that it is

5   improper to argue claim construction to the jury because the 'risk of confusing the jury is high when

6   experts opine on claim construction.'") (citing *CytoLogix Corp. v. Ventana Med. Sys., Inc.,* 424 F.3d

7   1168, 1172-73 (Fed. Cir. 2005)); Claim Construction Order 2-4 (Aug. 31, 217), ECF No. 168.

8   ## III.   THE COURT SHOULD PRECLUDE SAMSUNG'S EXPERTS FROM OFFERING OPINIONS AT TRIAL THAT ARE BASED ON IMPROPER CLAIM
9   CONSTRUCTIONS

10
A.   Huawei's '613 Patent

11   The '613 patent provides a mechanism for a mobile device to know when it may receive one

12   or more services from a network, thereby both limiting the power expended by the mobile device

13   and improving the efficiency of the network. *See* Huawei Opening Claim Construction Br. 9-11

14   (May 19, 2017), ECF No. 141. During the claim construction phase of this case, the parties

15   presented only one term for construction: "receiving/receive . . . a service." The Court agreed with

16   Huawei that no construction was necessary for this term. *See* ECF No. 168 at 10-11.

17   During the *Markman* presentation, the parties presented tutorials that explained the radio

18   frames and subframes used in LTE. As the parties explained, each frame consists of 10 subframes.

19   *See also* '613 patent at Fig. 4; Ex. 1, Lyon '613 Invalidity Rpt. ¶ 67. The '613 patent relates to

20   services that can be sent in certain designated radio frames and subframes and position information

21   that identifies these designated radio frames and subframes.

22   On May 25, 2018, Samsung's expert, Dr. David Lyon, submitted a rebuttal report on non-

23   infringement of the '613 patent. *See* Ex. 2, Lyon '613 Noninfringement Rpt. In his report, Dr. Lyon

24   presents non-infringement arguments based on three new claim construction positions that Samsung

25   never raised during the claim construction phase. *See* ECF No. 124 at 1-3. Specifically, Dr. Lyon

26   argues that Samsung does not infringe the '613 patent because:

27
28   (1) the "position information" of claims 1 and 5 must be "position information for the specific frames and subframes that [actually] contain the service," rather than

position information for frames and subframes that are "reserved" to carry the service, *see* Ex. 2, Lyon '613 Noninfringement Rpt. ¶ 82;

(2) claims 1 and 5 "do not provide a mechanism for representing the position of the first specific frame in the time unit to be anywhere other than the first frame of the time unit—a non-zero offset. In other words, the asserted claims do not allow there to be an 'offset' of frames in addition to the regular spacing of the specific frames within the time unit," *see id.* at ¶¶ 171-75;

(3) "[t]he majority of the claimed limitations require performance in the network, not the UE," and that "in order to allege that the Accused Products infringe all the limitations of claims 1 and 5 of the '613 patent, Dr. Akl needed to show that Samsung controlled the network to perform these limitations to such a degree that their actions could be imputed to Samsung," *see id.* at ¶¶ 188-90.

Dr. Lyon's claim construction positions on these "position information," "offset," and divided infringement issues run contrary to the proper construction of claims 1 and 5.

1.   Dr. Lyon's Opinions Based on an Improper Construction of "Position Information" Should Be Excluded.

Samsung's expert, Dr. Lyon, opines that the "position information" of claims 1 and 5 must be "position information for the specific frames and subframes that [actually] contain the service," rather than position information for frames and subframes that are "reserved" to carry the service, *see* Ex. 2, Lyon '613 Noninfringement Rpt. ¶¶ 28, 64, 71, 81-82, 120-21, 142-43, 153, 161. Dr. Lyon's opinion is improper.

Claims 1 and 5 require (in pertinent part) that a UE receive, or contain circuitry configured to receive: (a) a "service being sent in one or more subframes that are designated as specific subframes, the specific subframes being selected from one or more radio frames that are designated as specific radio frames;" and (b) "position information of the specific radio frames in the time unit and position information of the specific subframes in the specific radio frame on a transport channel." Reading those elements together, the claims require that the UE receives a "service" that is "***sent in***" one or more "designated" specific subframes selected from one or more "designated" specific radio frames, and the UE receives position information for those "designated" frames/subframes. Nothing in the plain language of the claims requires that ***all*** of the "designated" frames and subframes actually contain the service, such that there is an exact one-to-one correspondence between the designated frames/subframes and the frames/subframes that actually contain the service, as Dr. Lyon argues.

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1   For example, if subframes 1, 2, and 3 were designated as specific subframes, and a UE received a

2   service sent in subframes 1 and 2 (but not 3), the service would still be "sent in" subframes

3   designated as specific subframes.

4   Dr. Lyon's attempt to engraft extra limitations onto the claims finds no support in the

5   specification. The '613 specification makes clear that the patented technology allows the UE to

6   distinguish unicast from multicast/broadcast frames and subframes. The specification explains that

7   the problem addressed by the patent is how to "inform the usage of each subframe" to the UE, as

8   either MBMS or unicast services, which "are in time division multiplexing." *See* Ex. 3, '613 patent

9   at 1:54-2:4, 2:38-44, 17:32-52. After receiving such information, the UE can then either attempt to

10   read or ignore the frames and subframes designated for unicast or multicast/broadcast services,

11   depending on which services are requested by the user. *See id.* This technology solved multiple

12   problems facing 3GPP at the time in designing the LTE standard, including "reducing signaling

13   overhead" in the network and "saving electrical energy of the user equipment." *See* Ex. 4, R1-

14   071690 at 1; Ex. 3, '613 patent at 1:63-2:4, 2:38-44, 17:32-52. To solve those problems, it was not

15   necessary to specifically indicate only those frames and subframes that actually contain a service.

16   *See id.*; *see also* Ex. 5, X. Fan Dep. 58:2-61:12, 82:5-86:8 (explaining how signaling frame type

17   allows the UE to "rest" during certain frames). In contrast, Lyon cites nothing from the '613

18   specification to support his "position information" argument.[2]

19   Dr. Lyon's argument also runs directly contrary to the intrinsic evidence and fails to reflect

20   what the inventors actually invented. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir.

21   2005) (citing *Renishaw PLC v. Marposs Societa' per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998)

22   ("'Ultimately, the interpretation to be given a term can only be determined and confirmed with a full

23   understanding of what the inventors actually invented and intended to envelop with the claim.'").

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25   [2] The specification also makes clear that the term "service" in the claims is broad, and can refer to a
     transmission mode or one or more kinds of multimedia broadcast multicast (MBMS) services, a
26   service transmitted through a MBMS mode, or a service transmitted through a unicast mode. *See*
     Ex. 3, '613 patent at 17:53-18:10. Reading the claims to requires that each one of the "designated"
27   frames and subframes actually contains a service, as Dr. Lyon does, conflicts with the broad
     understanding of the term "service," which is not limited to a particular instance of a service such as
28   an individual stream, but can encompass a transmission mode.

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1   Huawei first publicly disclosed the technology of the '613 patent, and proposed incorporating it into

2   the LTE standard, by submitting a technical contribution called R1-071690 to the 3GPP standards-

3   setting organization. *See* Ex. 2, Lyon '613 Noninfringement Rpt. ¶ 42. Huawei cited the same

4   contribution to the patent office during examination of the '613 patent, which makes the contribution

5   intrinsic evidence that is highly relevant to claim construction. *See* Ex. 6, '613 patent file history

6   excerpt); *Philips*, 415 F.3d at 1317 ("'intrinsic evidence'…includes the prior art cited during the

7   examination of the patent.") (citation omitted). The R1-071690 contribution makes clear that it

8   relates to a UE receiving information about frame and subframe "***type (M[B]SFN or non-***

9   ***MBSFN)***."[3] *See* Ex. 4, R1-071690 at 1 (emphasis added); *see also id.* at 1-2 ("This contribution

10   provides a feasible solution for the ***indication of subframe type*** . . . two kinds of information need to

11   be configured every modifying period . . . . [i]nformation about the MBSFN frames distribution . . .

12   .[and] [i]nformation about the MBSFN subframes distribution within the MBSFN frame").

13   Information about frame and subframe type indicates which frames and subframes are "reserved" for

14   MBSFN versus non-MBSFN services. *See* Ex. 7, Lyon Dep. 171:5-13 (admitting that eMBMS can

15   only be "sent in frames and subframes that are designated as MBSFN subframes"). This evidence

16   directly contradicts Dr. Lyon's unsupported assertion that "position information" in the claims

17   cannot refer to which frames and subframes are "reserved" to carry services.[4]

18   In sum, Dr. Lyon's opinion based on the term "position information" finds no support in the

19   claims, specification, or intrinsic evidence. The Court should preclude Dr. Lyon from presenting

20   arguments based on this improper claim construction at trial, and should strike paragraphs 28, 59,

21   64, 71, 67, 81-82, 120-21, 141-43, 153, 159, and 161 of Dr. Lyon's report.

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24

25   [3] MBSFN stands for multicast-broadcast single-frequency network. MBMS services are sent in MBSFN frames.
26   [4] In fact, the entire basis of Dr. Lyon's position is illogical, because he effectively argues that the '613 patent claims must be construed to cover portions of the LTE standard that ***did not even exist***
27   ***until a year and a half after Huawei's technology was adopted into the standard*** (TS 36.331 v9.2.0) and that no witness has linked to the genesis of the '613 patent. *See* Ex. 2, Lyon '613 Noninfringement Rpt., ¶ 136. In contrast, Huawei's expert properly relies on a contemporaneous
28   version of the LTE standard (TS 36.331 v8.4.0) linked to Huawei's invention to prove infringement.

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2.   Dr. Lyon's Opinions Regarding What He Calls a "Non-Zero Offset" Have No Basis in the Claims and Should Be Excluded.

Claims 1 and 5 of the '613 patent require that the radio frames that are "designated as specific radio frames" be "selected from a time unit, wherein the time unit comprises 2^M radio frames . . . ." *See, e.g.*, Ex. 3, '613 patent at 18:29-30. Dr. Lyon asserts that this claim language requires that the "first specific frame in the time unit begins at the first frame of the time unit." *See* Ex. 2, Lyon '613 Noninfringement Rpt. ¶ 171. For example, in a time unit composed of 2^{10} (*i.e.*, 1024) radio frames, Dr. Lyon contends that claims 1 and 5 require that the first radio frame in the time unit *must* be designated as a specific radio frame, such that there is no "offset" between the start of the time unit and the start of the designated specific radio frames. *See id.* Lyon, however, points to nothing in the claims that imposes this spurious limitation. *See id.* Nothing in asserted claims 1 and 5 requires a specific starting position, and seeking to impose such a limitation is an improper attempt to narrow the scope of the claims. *See, e.g.*, *Hoganas AB v. Dresser Indus., Inc.*, 9 F.3d 948, 950 (Fed. Cir. 1993) ("It is improper for a court to add 'extraneous' limitations to a claim") (citation omitted); *Laryngeal Mask Co. v. Ambu A/S*, 618 F.3d 1367, 1371 (Fed. Cir. 2010) ("Certainly, it would be improper to add a tube joint limitation to the claims at issue where none appears.").

The same conclusion follows directly from the '613 patent specification. The embodiments described in the '613 patent specifically contemplate use of non-zero offsets. The '613 patent uses the term "starting position" to refer to what Dr. Lyon calls an "offset." In one embodiment, "F can represent the number Gp of the specific radio frames in the time unit," where Gp together with "*starting position g_0*" which "can be appointed or informed by the signaling" precisely identify the position of the MBSFN radio frames. *See* Ex. 3, '613 patent at 13:58-14:27. The specification states that "the starting position may be appointed as 0," but a person of ordinary skill in the art would understand that "may" does not mean "must." The specification reinforces that the starting position need not be 0 by using a variable (g_0) rather than a constant to represent it. A person of ordinary skill would understand that a variable can vary—it need not always be 0 as Dr. Lyon asserts.

In another embodiment, the specification similarly states that "the positions of the specific radio frames can be determined according to a *starting position f_0* of the successive Fp specific radio

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1   frames and the value of Fp." *See* Ex. 3, '613 patent at 13:42-57 (emphasis added). In that

2   embodiment, the "starting position f₀" "*may* be appointed as 0" according to the specification. *See*

3   *id.* at 13:56-57; *see also id.* at 14:28-65. Relatedly, the specification explains that in one

4   embodiment, the subframes that are designated as specific subframes can be calculated from a

5   formula that includes the quantity r₀, which "is the position of a first specific subframe in the specific

6   radio frame." The patent teaches that "[g]enerally, r₀=0 can be adopted." *Id.* at 8:15-48. In short, the

7   '613 patent specifically contemplates use of non-zero offsets not once but multiple times.

8   Accordingly, the plain language of the claims and specification refute Dr. Lyon's spurious claim

9   construction argument regarding an "offset." The Court should preclude Dr. Lyon from presenting

10   his "offset" argument at trial, and should strike paragraphs 171 to 175 of Dr. Lyon's report.

3.   Dr. Lyon's Divided Infringement Opinions Rest on an Improper Construction of Claims 1 and 5 and Should Be Excluded.

13   Dr. Lyon presents a divided infringement argument in his report, based his assertion that "the

14   majority of the claimed limitations [in claims 1 and 5 of the '613 patent] require performance in the

15   network, not the UE." *See* Ex. 2, Lyon '613 Noninfringement Rpt. ¶ 188. Lyon asserts that, as a

16   result, "Huawei must prove that Samsung controlled the network to perform these limitations to such

17   a degree that their actions could be imputed to Samsung." *See Id.* at ¶ 190. The Court should

18   preclude Dr. Lyon from presenting this argument at trial because Dr. Lyon relies on an incorrect

19   understanding of the law and an incorrect reading of the claims.

20   As an initial matter, claim 5 is a product claim covering "user equipment," such as a mobile

21   phone. Samsung has not shown that divided infringement can legally apply to such a product claim.

22   *See Akamai Techs., Inc. v. Limelight Networks, Inc.*, 692 F.3d 1301, 1305–06 (Fed. Cir. 2012), *rev'd*

23   *on other grounds*, 134 S. Ct. 2111 (2014) ("When claims are directed to a product or apparatus,

24   direct infringement is always present, because the entity that installs the final part and thereby

25   completes the claimed invention is a direct infringer."); *see also Akamai Techs., Inc. v. Limelight*

26   *Networks, Inc.*, 797 F.3d 1020, 1022 (Fed. Cir. 2015) (en banc) (stating that divided infringement

27   doctrine pertains to method claims). Here, there can be no dispute that Samsung at least imports,

28   offers for sale, and sells in the United States the Samsung phones that Huawei accuses of

1   infringement. Therefore, Dr. Lyon's divided infringement argument for claim 5 of the '613 patent

2   fails as a matter of law.

3   Dr. Lyon's divided infringement argument for claims 1 and 5 of the '613 patent also fail as a

4   matter of law, because claims 1 and 5 are written from a single perspective—user equipment (UE).

5   As the Federal Circuit has explained, "a patentee can usually structure a claim to capture

6   infringement by a single party, by focusing on one entity." *Uniloc USA, Inc. v. Microsoft Corp.*, 632

7   F.3d 1292, 1309 (Fed. Cir. 2011) (citation omitted). That is exactly what Huawei did in claims 1

8   and 5. The elements of claim 1 unambiguously recite "receiving, by a user equipment" a service and

9   position information. Claim 5 is similar. "That other parties are necessary to complete the

10   environment in which the claimed element functions" is irrelevant. *See id.* In fact, in *Uniloc*, the

11   Federal Circuit provided an example of a claim that does not have divided infringement problems:

12   "a claim that reads 'An algorithm incorporating means for receiving e-mails' may require two parties

13   to function, but could nevertheless be infringed by the single party who uses an algorithm that

14   receives e-mails." *See id.* The Federal Circuit's example has a very similar structure to claims 1 and

15   5 of the '613 patent.

16   Similarly, in *Tech. Patents LLC v. T-Mobile (UK) Ltd.*, 700 F.3d 482, 501 (Fed. Cir. 2012),

17   held that the claims "do not present an issue of joint or divided infringement. That is because,

18   contrary to the district court's ruling, those claims do not require performance by multiple actors."

19   *Id.* The Federal Circuit concluded that "representative claim 11 requires action only by the

20   originating user," despite the fact that claim 11 recited characteristics of computers in

21   communication with the originating user's computer. *See id.* at 490-91, 501; *see also FotoMedia*

22   *Techs, LLC v. AOL, LLC*, 2009 WL 2175845, *8 (E.D. Tex. July 21, 2009) (rejecting accused

23   infringer's argument that a claim limitation reciting "receiving image data embodying an electronic

24   image, the image data transferred under control of the user at the sending computer" recited a

25   separate step performed by the user at the sending computer).

26   There is no support for Dr. Lyon's new divided infringement argument for claims 1 or 5 of

27   the '613 patent. The Court should therefore preclude Lyon from presenting his divided infringement

28   argument at trial, and should strike paragraphs 188 to 190 of Dr. Lyon's report.

B.   Huawei's '587 Patent

      1.   Dr. Lyon's Divided Infringement Opinions Rest on an Improper Construction of Claims 3 and 9 and Should Be Excluded.

Similar to his opinions offered with respect to the '613 patent (*see* Section III.A, above), Lyon also presents a divided infringement argument in his non-infringement expert report regarding the '587 patent, based his assertion that "the majority of the claimed limitations [in claims 3 and 9 of the '587 patent] require performance in the network, not the UE." *See* Ex. 8, Lyon '587 Noninfringement Rpt. ¶ 134. Lyon asserts that, as a result, "Dr. Akl [Huawei's technical expert] needed to show that Samsung controlled the network to perform these limitations to such a degree that their actions could be imputed to Samsung." *Id.* ¶ 136. For the reasons specified above in Section III.A.3 and those further explained below, the Court should preclude Lyon from presenting this irrelevant and unreliable argument at trial, because it relies on an incorrect understanding of the law and incorrect reading of claims 3 and 9 of the '587 patent.

First, claim 9 is an apparatus claim directed to "user equipment." As explained above in Section III.A,3, Samsung has not shown that divided infringement can legally apply to such a product claim. *See Akamai*, 692 F.3d at 1305–06; *see also Akamai*, 797 F.3d at 1022. There is no dispute that Samsung at least imports, offers for sale, and sells in the United States the Samsung phones that Huawei accuses of infringing the '587 patent. Thus, Lyon's divided infringement argument for claim 9 of the '587 patent fails as a matter of law.

Moreover, claims 3 and 9 of the '587 patent are written entirely from the perspective of the user equipment (or device). The claims require that the user equipment perform or be capable of performing the following steps: (1) receiving downlink control information (DCI) from the network; and (2) feeding back ACK/NACK information according to commands configured in the DCI received from the network.

The claims provide further explanation of how the common field *must already be configured* in the DCI when it is received and acted on by the user equipment. For example, claims 3 and 9 both specify: "wherein the common field is configured as one command according to a type of downlink component carrier . . . ." Ex. 9, '587 patent at 22:21-32 (claim 3), 23:8-19 (claim 9). In

1   doing so, the claims merely specify that the user equipment must receive or be capable of receiving

2   the already-configured DCI and then feedback information according to the configuration of the

3   DCI. Claims 3 and 9 require Huawei to demonstrate that the DCI received by Samsung's devices

4   has been configured in a certain manner, but they do not require Huawei to show that Samsung

5   performed or controlled the act of applying this configuration.

6   Thus, there is no support for Dr. Lyon's divided infringement argument in claims 3 or 9 of

7   the '587 patent. The Court should therefore preclude Dr. Lyon from presenting this unreliable and

8   irrelevant argument at trial, and should strike paragraphs 134 to 136 of Dr.Lyon's non-infringement

9   expert report concerning the '587 patent.

   C.   Samsung's '105 patent

        1.   Overview

   The '105 patent describes a transmitter in an OFDM/OFDMA system. Ex. 10, Min Rebuttal
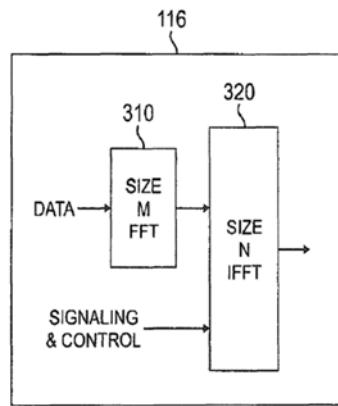
   Rpt. ¶ 157. As depicted in Fig. 3 (to the left), the OFDM/OFDMA transmitter according to the '105 Patent performs Fourier transform (FFT or FT) precoding on only the data symbols before the symbols are converted into the time domain signals via IFFT (or IFT). *Id.* Samsung asserts that this results in a lower peak-to-average power ratio (PAPR) when the IFT converts the frequency-domain symbols into time-domain signals. *Id.* at ¶ 159.

        2.   Dr. Prucnal's Opinions Regarding Mapping FT Precoded Symbols and Non-FT Precoded Modulation Control Symbols at Different Times Should Be Excluded.

        Asserted claim 28 of the '105 patent requires "mapping the FT pre-coded symbols to a first set of subcarriers" and "mapping the non-FT pre-coded modulation control symbols to a second set of subcarriers." Both sets of "subcarriers" are input to the IFT.

        Samsung's expert, Dr. Paul Prucnal, asserts that the "first set of subcarriers" corresponds to the physical uplink shared channel (PUSCH) and the "second set of subcarriers" corresponds to the physical uplink control channel (PUCCH). Ex. 11, Prucnal Rpt. ¶¶ 416, 432. PUSCH and PUCCH

                                          10

1   are never transmitted at the same time (*see* Declaration Of Dr. Mark Mahon, Ph.D. in Support Of

2   Huawei's Motions for Summary Judgment ("Mahon Decl.") ¶ 4; Mahon Decl. Ex. A, TS 36.211

3   v8.7.0, pp. 12, 16, 32), so Samsung's expert's infringement opinion relies on reading these claim

4   elements such that the "FT pre-coded symbols" and the "non-FT coded modulation control symbols"

5   can be mapped at different times and be transmitted in different symbols resulting from separate IFT

6   operations. This opinion contradicts the claim and should be excluded.

7   The claim language and specification require that "mapping the FT pre-coded symbols to a

8   first set of subcarriers" and "mapping the non-FT pre-coded modulation control symbols to a second

9   set of subcarriers" must occur such that both sets of subcarriers are available for the same IFT

10   operation (the operation that creates the transmission symbols). *See* Mahon Decl., ¶ 4. Claim 28

11   requires performing the IFT operation on one or both sets of subcarriers: "performing an inverse

12   Fourier Transform (IFT) operation on at least one of (i) the FT pre-coded symbols based on the first

13   set of subcarriers and (ii) the non-FT pre-coded modulation control symbols based on the second set

14   of subcarriers to generate an output signal." For the case when the IFT operation is performed on

15   both sets of subcarriers, both sets of subcarriers (i.e., first and second) must be available at the same

16   time for the same IFT operation. Furthermore, this must also be true when the IFT is performed only

17   on one of the subcarriers because the claim terms that "map" to the "first subcarrier" and "second

18   subcarrier" cannot have different meanings when the IFT is performed only on one of the "(i) the FT

19   pre-coded symbols" or "(ii) the non-FT pre-coded modulation control symbols."

20   The specification leads to the same conclusion. Figures 6A, 6B, and 6C are the only

21   description of mapping data and control information to different sets of subcarriers in the '105

22   patent. Mahon Decl. Ex. C, '105 patent at 8:22-59, Fig. 6A, Fig. 6B, Fig. 6C. These figures show

23   mapping data and control information to different sets of subcarriers that compose a larger group of

24   subcarriers available at the same time. The '105 patent never discloses mapping data and control

25   information to different sets of subcarriers in a configuration other than those discussed in Figures

26   6A, 6B, and 6C, nor does it include general language stating that such mappings could be performed.

27   Dr. Prucnal's opinion relies on interpreting the claim to allow separate IFT operations on the

28   alleged control information and alleged data information, even when the IFT operations are

<center>11</center>

separated in time. Ex. 11, Prucnal Rpt. ¶¶ 446-63. This opinion contradicts the claim, and for that

reason, the Court should exclude Dr. Prucnal's opinion regarding the mapping of the FT pre-coded

symbols to a first set of subcarriers and the mapping the non-FT pre-coded modulation control

symbols to a second set of subcarriers. The Court should therefore preclude Dr. Prucnal from

presenting this unreliable and irrelevant argument at trial, and should strike paragraphs 413-445 of

Dr.Prucnal's infringement expert report concerning the '105 patent.

D.   Samsung's '130 Patent

Samsung's '130 patent relates to multiplexing control and data information in single-carrier

frequency division multiple access (SC-FDMA) communication systems, and more specifically, the

transmission of acknowledgement bits and channel quality indicator bits together with data

information bits in an SC-FDMA communications system. Ex. 12, Bambos Infr. Rpt. ¶ 117; Ex. 13,

'130 patent at 1:15-25. The '130 patent describes mapping these bits and a reference signal to

certain locations in a "slot." *See* Ex. 13, '130 patent at Fig. 10, 6:45-50.

1.   Dr. Bambos Opinions Based on an Improper Construction of "Mapping Data Information to Remaining Symbols" Should Be Excluded.

Claim 13 of the '130 patent requires "mapping the data information to remaining symbols in

the slot that are not used to map the reference signal." This claim language is unequivocal that the

"data information" goes into each and every symbol that does not hold the reference signal. The

specification is consistent. *See* Ex. 13, '130 patent at Fig. 10, 6:45-50.

The infringement theory of Samsung's expert, Dr. Nicholas Bambos, is based on his opinion

that the physical uplink shared channel (PUSCH), operating as described in the 3GPP LTE

standards, satisfies the elements of the claim, including the "mapping the data information"

limitation. However, his opinion ignores that some of the symbols in PUSCH carry a sounding

reference signal (SRS) and no data information. Mahon Decl. ¶ 37. According to TS 36.211,

Section 5.3.4 of the LTE standard, the data and control information should be mapped "to resource

elements (k, l) corresponding to the physical resource blocks assigned for transmission and not used

for transmission of reference signals and not reserved for possible SRS transmission." Mahon Decl.

Ex. A, TS 36.211 at p. 15 § 5.3.4 (emphasis added); Mahon Decl. ¶ 37. Dr. Bambos never opines

1 that the SRS holds data information, and in fact, it does not. Mahon Decl. ¶ 37.

2   Dr. Bambos's opinion should be excluded because it relies on an improper construction of

3 the phrase "mapping data information to remaining symbols." The plain meaning of the phrase is

4 that data information is mapped to all of the remaining symbols. SRS signals, which contain no data

5 information, cannot be mapped to the remaining symbols.   Thus, there is no support for Dr.

6 Bambos's opinion that data information is mapped to the remaining symbols, as required by claim

7 13. The Court should therefore preclude Dr. Bambos from presenting this unreliable and irrelevant

8 argument at trial, and should strike paragraphs 550 to 594 of Dr. Bambos's infringement expert

9 report concerning the '130 patent.

2.   Dr. Bambos's Opinions Based on an Improper Construction of "CQI Information Being Multiplexed with the Data Information" Should Be Excluded.

Claim 13 of the '130 patent requires that the "CQI information is multiplexed with the data

information." The antecedent to "the data information" is in the "mapping the data information to

remaining symbols in the slot that are not used to map the reference signal" step. By its language,

that step therefore requires "the data information" to mapped in all the remaining symbols. Because

the CQI information is multiplexed with "the data information," it must also be mapped to all the

remaining symbols.

Claim 13 requires each symbol other than the one holding the reference signal to contain CQI

information. Dr. Bambos opines that each non-reference signal symbol in LTE contains CQI. He is

wrong however, and another one of Samsung's experts, Dr. Prucnal, testified that Dr. Bambos was

wrong, as explained below.

In his report, Dr. Bambos opines that: "[a]s described in Section 5.3.4 of TS 36.211 below,

the multiplexed data and CQI information is mapped to every symbol not containing the DM RS.

Each symbol, in other words, consists of coded CQI and data information mapped over different

subcarriers." Ex. 12, Bambos Infr. Rpt. ¶ 564. Samsung's expert, Dr. Prucnal, testified that Dr.

Bambos is incorrect:

> Q   Turn to Paragraph 564 on Page 164. First sentence of Paragraph 564 reads, "As described in Section 5.3.4 of TS 36.211 below, the multiplex data and CQI

13

information is mapped to every symbol not containing the DMRS." Is that a correct reading of that sentence?

A   That's a correct reading of the sentence, yes.

Q   Do you agree with Dr. Bambos' sentence?

A   No. I don't -- I don't agree with this. I don't think that this is -- if he's representing this as being always the case, I don't agree with it. It -- it may be sometimes the case, but not always.

Ex. 14, Prucnal Dep. (June 15, 2018) 61:19-62:8.

Thus, there is no support for Dr. Bambos's opinion that CQI information is multiplexed with data information and mapped to every symbol not containing the Reference Signal, as required in claim 13. The Court should therefore preclude Dr. Bambos from presenting this unreliable and irrelevant argument at trial, and should strike paragraphs 563-564, and 684-708 of Dr. Bambos's infringement expert report concerning the '130 patent.

E.   Huawei's '239 Patent

The '239 patent relates to allocating and processing "sequences" and "sequence groups" in a communication system. These sequences and groups of sequences are used "as a reference signal for channel estimation"—a way to describe how a signal propagates from a transmitter to a receiver. Ex. 15, Madisetti Non-Infr. Rpt. ¶ 48; Ex. 16, '239 patent at 1:52-54. The '239 patent discloses a technique for allocating sequences groups in a way that minimizes interference between mobile devices in nearby cells. Zadoff-Chu ("ZC") sequences have the characteristic, when applied to radio waves used in cellular networks, that combining shifted versions of the same ZC sequence typically results in low correlation between the shifted sequences. This effect allows a base station to distinguish signals transmitted by different mobile devices. But if not allocated properly, different ZC sequences used by mobile devices in nearby cells may have greater correlation and, thus, may cause inter-cell interference between and among mobile devices in adjoining cells. *See* Huawei's Opening Claim Construction Br. at 6 (May 19, 2017), ECF No. 141.

1.   Dr. Madisetti's Opinions Based on an Improper Construction of "Obtaining" Should Be Excluded.

Huawei's expert, Dr. Venugopal Veeravalli, opines that the "obtaining … a group number k of a sequence group allocated by the system" claim element of the 892 Patent is met because the

14

1   mobile device calculates the claimed "group number k" from the Δss and cell ID received from the

2   base station. Ex 17, Veeravalli '239 Inf. Rep. ¶¶ 255-256. Samsung's expert, Dr. Vijay Madisetti

3   responds that Samsung allegedly does not perform this element because the "obtaining" step does

4   not cover receiving information from the network and then calculating the "group number k" based

5   on the received information. Ex. 15, Madisetti Non-Infr. Rpt. ¶ 64. Dr. Madisetti's interpretation of

6   the "obtaining" element is contrary to plain language of the claims and the intrinsic record and,

7   therefore, Dr. Madisetti's opinion should be excluded.

8   The claim language "obtaining … a group number k of a sequence group allocated by the

9   system" does not require receiving the actual group number k from an external device, as Dr.

10   Madisetti opines. *See* Ex. 15, Madisetti Non-Infr. Rpt. ¶ 65. Nothing in the intrinsic record

11   precludes calculating the "group number k" from information received for, or allocated by, the

12   system. Indeed, Dr. Madisetti does not, and cannot, cite to any evidence for his improper

13   construction of the term "obtaining." Instead, the '239 patent's specification expressly indicates that

14   "obtaining" can include calculating. The specification says (twice) that "[t]he transmitter and the

15   receiver may obtain the data through calculation in this way rather than store the data." Ex. 16, '239

16   patent at 13:13-15, 21:47-48. Similarly, dictionary.com defines "obtaining" as "to come into

17   possession of; get, acquire, or procure, as through an effort or by a request." Ex. 18,

18   http://www.dictionary.com/browse/obtaining; *see also* Ex. 19, https://www.merriam-

19   webster.com/dictionary/obtaining ("to gain or attain usually by planned action or effort").

20   Dr. Madisetti's construction contradicts of the term "obtaining" is wrong, as a matter of law.

21   The Court should therefore preclude Dr. Madisetti from presenting this unreliable and irrelevant

22   argument at trial, and should strike paragraphs 63-67 of Dr. Madisetti's non-infringement expert

23   report concerning the '239 patent.

2.   Dr. Madisetti's Opinions Requiring a "Sequence" to Be a ZC Sequence Are Based on an Improper Construction and Should Be Excluded.

26   Dr. Madisetti introduces an incorrect claim construction – not disclosed during the claim

27   construction process – to argue that the claimed "corresponding sequence" must be a particular type

28   of sequence. Claims 7 and 18 recite that "the sequences correspond to at least one of: Zadoff-Chu

15

1   (ZC) sequences and Gauss sequences." These claims therefore require only that the claimed

2   sequence *correspond* to a ZC or Gauss sequence, not actually be a ZC or Gauss sequence.

3   Dr. Madisetti opines that certain sequences in the accused LTE standard are not ZC

4   sequences. He argues that "[b]ecause the claimed base sequences are cyclic extended in the LTE

5   standard ███████████████████████████████████ they are not Zadoff-Chu sequences or

6   Gauss sequences." Ex. 15, Madisetti Non-Infr. Rpt. ¶ 95 (citations omitted). Rather, Madisetti

7   argues that the "base sequence" "appends another extension" to "$x_q(m)$ as shown in Section 5.5.1.1

8   of 3GPP TS 36.211."[5] Ex. 15, Madisetti Non-Infr. Rpt. ¶ 92. Dr. Madisetti admits that $x_q(m)$ is a

9   ZC sequence. Ex. 20, Madisetti Dep. (June 12, 2018) 154:12-15.

10   Dr. Madisetti's opinion should be excluded because it contradicts the claim language. The

11   plain claim language does not require that the "sequence" be a Zadoff-Chu sequence. Rather the

12   claim requires only that "the sequences correspond to . . . Zadoff-Chu sequences."

13   This distinction is important because Dr. Madisetti admits that the sequence $x_q(m)$, identified

14   by Dr. Veeravalli and found in the LTE standard, is a ZC sequence. Ex. 20, Madisetti Dep. 154:12-

15   15. The "base sequence," as Dr. Madisetti calls it, contains this $x_q(m)$ sequence plus a portion of that

16   sequence repeated. Ex. 15, Madisetti Non-Infr. Rpt. ¶ 93 ("While the sequence $xq(0)…xq(30)$ may

17   be defined as a Zadoff-Chu sequence, the base sequence $xq(0)…xq(35)$ will not be a Zadoff-Chu

18   sequence because a cyclic extension of a Zadoff-Chu sequence when appended to a Zadoff-Chu

19   sequence would not result in a Zadoff-Chu sequence"). That "base sequence" therefore corresponds

20   to a ZC sequence, as claimed, because it comprises a particular ZC sequence (*i.e.*, $x_q(m)$), plus a

21   repetition of part of that sequence, as Dr. Madisetti admits. The Court should therefore exclude Dr.

22   Madisetti's opinion as contrary to the claim language.

23   The Court should therefore preclude Dr. Madisetti from presenting this unreliable and

24   irrelevant argument at trial, and should strike paragraphs 91-95 of Dr. Madisetti's non-infringement

25   expert report concerning the '239 patent.

26

27   [5] By analogy, the appended sequence described above is like a sequence 30 letters long that contains the 26 letters in the alphabet followed by the repetition of A through D for the last four letters in the sequence. The sequence in the standard contains a ZC sequence, $x_q(m)$, followed by a repetition of

28   as much of that sequence as necessary to fill out the sequence.

16

3. Dr. Madisetti's Opinions Based on an Improper Construction of "n sequences" Should Be Excluded.

Dr. Madisetti relies on a faulty claim construction to opine that Samsung's accused devices do not practice the element "selecting . . . n sequences from a candidate sequence collection to form sequences in a sub-group i in a sequence group k." Dr. Madisetti incorrectly opines that Samsung does not infringe because "selecting … n sequences" requires selecting more than one sequence. *See* Ex. 15, Madisetti Non-Infr. Rpt. ¶ 76.

Dr. Madisetti's reading of the claim, however, contradicts the law on interpreting plural claim terms and is inconsistent with the '239 patent. "In context, the plural can describe a universe ranging from one to some higher number, rather than requiring more than one item." *Versa Corp. v. Ag-Bag Int'l Ltd.*, 392 F.3d 1325, 1330 (Fed. Cir. 2004) (holding that "the use of 'channels' in the plural does not imply multiple channels") (citing *Dayco Prods, Inc. v. Total Containment, Inc.*, 258 F.3d 1317, 1328 (Fed. Cir. 2001)).

The claim language citing "*n sequences*" provides such context—*i.e.*, that the "*n*" number of sequences can "rang[e] from one to some higher number, rather than requiring more than one [sequences]." *Id.* The '239 patent's specification expressly explains that "n sequences" can be 1 or more sequences: "selection of the n sequences comes in two circumstances: **Preferably, n is 1**, namely, in the foregoing example, a sequence that makes $(r_m/N_m$-$k/N_1)$ the smallest is selected and included into a sub-group m. Preferably, n is a natural number greater than 1, and the value of n depends on the length difference between subgroup N_m and reference sub-group N_1." Ex. 16, '239 patent at 9:7-15 (emphasis added). Nor is this the only place the specification expressly includes one sequence in "n sequences." *Id.* at 19:26-34.

Dr. Madisetti's non-infringement opinion relies on an incorrect reading of the claim language. The Court should therefore preclude Dr. Madisetti from presenting this unreliable and irrelevant argument at trial, and should strike paragraphs 75-77 of Dr. Madisetti's non-infringement expert report concerning the '239 patent.

F. Huawei's '892 Patent

The '892 patent relates to random access procedures in mobile communications systems,

such as 3GPP cellular systems. *See* Ex. 15, Madisetti Non-Infr. Rpt. ¶ 111. The '892 patent creates

random access preambles that substantially reduce the risk of interference with other random access

preambles while reducing signaling needs. All mobile devices within a cell select one of 64 random

access preambles. To reduce interference, this set of RAPs uses zero correlation zone (ZCZ)

sequences. Ex. 21, '892 patent at 9:34-41; 10:30-37. Random access preambles generated with

ZCZ sequences of a proper length for the cell size prevent a given sequence from interfering with

other copies of itself or with properly shifted versions of itself. *Id.* at 2:54-59. These ZCZ sequences

also allow the base station to distinguish signals from multiple mobile devices and to accurately

determine the propagation delay from each mobile device. *Id.* at 2:31-47. The '892 patent describes

random access preambles as utilizing one or more "root sequences" shifted by multiples of one of 16

identified cyclic shifts, resulting in non-interfering ZCZ sequences. Utilizing only 16 possible shifts

reduces the signaling between the base station and mobile devices because the 16 shifts can be

identified with fewer bits than a larger number of shifts. *See* Pls.' Opp'n to Mot. to Dismiss 5 (Sept.

27, 2016), ECF No. 86.

1.   Dr. Madisetti's Opinion Requiring the UE to Select N_{CS} Is Based on an Improper Construction and Should Be Excluded.

Claims 1 and 10 of the '892 patent include an element requiring: "where Ncs is a cyclic shift

increment selected from a pre-defined set of cyclic shift increments." Samsung's expert, Dr.

Madisetti, opines that Samsung does not infringe because "it is the base station that signals the cyclic

shift increment to the UE [user equipment] in the N_{CS} configuration value." Ex. 15, Madisetti Non-

Infr. Rpt. ¶ 127. This opinion is premised upon a fundamental misreading of the claim language,

and should be excluded.

Claim 1 of the '892 patent requires "transmitting, by the UE, the selected random access

preamble, wherein the set of random access preambles is provided with Zero Correlation Zones of

length N_{CS}-1, where Ncs is a cyclic shift increment selected from a pre-defined set of cyclic shift

increments." Claim 10 contains a similar element.

Neither of these claims indicates how Ncs is selected or determined, and therefore the claim

does not require the UE to select the Ncs value. This contrasts to other claim elements that

18

specifically include the "by the UE" limitations. *See e.g.*, Ex. 21, '892 patent at claim 10 ("transmit

the selected random access preamble …"). Courts "give effect to the terms chosen by the patentee."

K-2 Corp. v. Salomon S.A., 191 F.3d 1356, 1364 (Fed. Cir. 1999). The claim does not require the

UE to select N_{CS} and can also cover the situation where the base station selects the N_{CS} value and

sends it to the UE.

      Dr. Madisetti's construction of the term "selecting" is wrong, as a matter of law. The Court

should therefore preclude Dr. Madisetti from presenting this unreliable and irrelevant argument at

trial, and should strike paragraphs 116-121 of Dr. Madisetti's non-infringement expert report

concerning the '892 patent.

      2.   **Dr. Madisetti's Opinions Based on an Improper Construction of "A Set of Random Access Preambles" Should Be Excluded.**

      Claims 1 and 10 require "selecting, by a user equipment (UE), a random access preamble

from a set of random access preambles." For this selecting element, Dr. Madisetti bases his opinion

that Samsung does not infringe on the non-existent requirement that all the random access preambles

be stored on the UE. Ex. 15, Madisetti Non-Infr. Rpt. ¶¶ 122-23. Dr. Madisetti relies upon an

incorrect construction that Samsung never raised in the Patent L.R. 4-3 Joint Claim Construction

Statement and should be barred from offering opinions to the jury that are inconsistent with the

legally correct claim construction.

      The ordinary meaning of "selecting . . . a random access preamble from a set of random

access preambles" does not require storing the set of random access preambles on the UE. Rather, a

set can be a group of options from which the selected random access preamble can be created or

generated. By analogy, a restaurant menu contains a set of entrées available for dinner. When a

customer selects an entrée from the menu, the restaurant then prepares that dish. Similarly, in

mathematics, one can select from the set of all even numbers even if one cannot or has not written

out the infinite number of even numbers. In neither case does selecting from a set require every

member of the set to be prepared or stored before the selecting.

      The ordinary meaning of this claim element does not require storing the preambles for the

same reason. Dr. Madisetti's construction of the phrase "from a set of random access preambles" is

1 is wrong, as a matter of law. The Court should therefore preclude Dr. Madisetti from presenting this

2 unreliable and irrelevant argument at trial, and should strike paragraphs 122-126 of Dr. Madisetti's

3 non-infringement expert report concerning the '892 patent.

4   **G.**   **Samsung's '825 Patent**

5   **1.**   **Dr. Valenti's Opinions Based on an Improper Construction of "Without**
6   **Checking a Downlink Channel" Should Be Excluded.**

7   Samsung's '825 patent is directed to reducing the possibility of collisions between different

8 UEs in the event that the UEs initiate communications with a base station using the same shared

9 channel during the same time period. This reduction in the possibility of collisions is achieved by

10 having the UE wait for a predetermined period of time before checking the downlink channel for a

11 response to the UE's initial message. *See, e.g.,* Ex. 22, '825 patent at Figs. 5-6, 6:12-39, 6:53-56;

12 Ex. 23, Valenti Infr. Rpt. ¶¶ 108-109; Ex. 24, Valenti Dep. (June 20, 2018) 33:8-16, 34:11-23, 37:1-

13 10; Ex. 25, Soeng-Hun Kim Dep. (Sept. 29, 2017) 203:4-11, 204:2-18.

14   Samsung's expert, Dr. Matthew Valenti, opines that the LTE standard and Huawei's products

15 "wait[] a predetermined delay duration without checking a downlink channel," and therefore infringe

16 claims 1 and 4 of the '825 patent. Dr. Valenti's opinion, however, is based on a previously

17 undisclosed and legally incorrect construction of "without checking a downlink channel" that runs

18 afoul of the canons of claim construction. Dr. Valenti's incorrect construction and his corresponding

19 opinions regarding infringement—as set forth in paragraphs 457-487 of his opening infringement

20 report—should be excluded.

21   Claims 1 and 4 recite "after the transmitting of the first uplink signal, waiting for a

22 predetermined delay duration without checking a downlink channel." Dr. Valenti's infringement

23 analysis reveals that he implicitly construes "without checking a downlink channel" as "without

24 checking a downlink channel <u>for a specific message</u>" in order to arrive at his infringement opinion.

25 For example,

26

27   Ex. 23, Valenti Infr. Rpt. ¶483 (emphasis added).

28

1   ███   *Id.* at ¶470 (emphasis

2   added). He confirmed this interpretation during his deposition. When asked for his interpretation of

3   monitoring or checking a control channel, he explained: "So I would interpret monitoring [a control

4   channel] as looking for ***a particular control message*** that's been tagged with a particular ID, and

5   only using it if it matches the ID that you're looking for." Ex. 24, Valenti Dep. 85:23-86:3

6   (emphasis added).[6] He further explained that the claim relates only to monitoring for a specific type

7   of message: "the claim is just describing monitoring of random access response[s]." Ex. 24, Valenti

8   Dep. 90:6-24.

9   Dr. Valenti's implicit construction impermissibly broadens the scope of the asserted claims

10 beyond to encompass UEs that check a downlink channel for only some, but not all, messages during

11 the "predetermined delay duration." Claim 1 recites "without checking a downlink channel," full

12 stop. It does not limit the "without checking" element to any specific message. Samsung "could

13 have specifically disclaimed [only] a particular" type of checking, "but did not do so," and instead

14 disclaimed all checking of a downlink channel during the predetermined delay duration. *Imaginal*

15 *Systematic, LLC v. Leggett & Platt, Inc.*, 805 F.3d 1102, 1110 (Fed. Cir. 2015). Dr. Valenti's attempt

16 to broaden the scope of the claim by rewriting a negative claim limitation to disclaim only one

17 specific example is improper and should be stricken. *See id.*

18   No portion of the '825 patent's specification redefines the ordinary meaning of "checking" in

19 the way that Dr. Valenti asserts, nor broadens the "without checking" requirement to encompass

20 checking for some, but not all, messages on a downlink channel. Samsung cited extensive portions

21 of the specification in its Patent L.R. 4-3 submission that it contended showed the plain and ordinary

22 meaning of "without checking a downlink channel." *See* Exhibit A to Joint Claim Construction

23 Statement 60-31 (Apr. 7, 2017), ECF No. 124-1 (citing '825 patent at Abstract: 5-8; 3:38-39; 3:52-

24

25 [6] The '825 patent's specification does not use the term "check" in the context of "without checking a downlink channel." Instead, it repeatedly refers to "without monitoring a downlink channel." *See,*
26 *e.g.*, Ex. 22, '825 patent at Abstract 5-6; 3:38, 3:52-53, 6:36-39, 6:53-54, 7:25-26, 10:1-3. During prosecution of the '825 patent's parent application, Samsung also equated the two terms. *See* Ex. 26,
27 '392 Patent FH Dec. 18, 2012 Amendment and Response to Final Office Action at pp. 3-4 (reciting "without *checking* a downlink channel"), and p. 10 (arguing the claims require waiting "without
28 *monitoring* a downlink channel"). Dr. Valenti also repeatedly equated the terms during his deposition. *See, e.g.,* Ex. 24, Valenti Dep. 32:19-35:22, 82:24-83:23, 89:20-90:24, 130:19-131:1.

55, 67-68; 6:53-57; 6:55-7:7; 7:24-28; 10:1-5; Figs. 6, 7, 8, 9, 11, 12). Each of these citations

references waiting "without checking" a "channel," not "without checking" a "channel for a specific

message." *E.g.*, Ex. 22, '825 patent at 6:53-54 ("After sending the IUM, the UE waits for a delay

duration 610 of T without monitoring a SCCH."). Dr. Valenti's new construction is at odds with

Samsung's Patent L.R. 4-3 submission.

The parent of the '825 patent further confirms the proper scope of this claim element as

precluding *all* checking of a downlink channel. Where the '825 patent recites "without checking a

downlink channel," its parent, U.S. Patent No. 8,670,392, recites "without checking a downlink

channel to determine whether a downlink signal responding to the uplink signal is received." Ex. 27,

'392 patent at 11:48-51 (emphasis added). Samsung was clearly capable of limiting the "without

checking a downlink channel" to checking for a particular message, but it failed to do so. Thus, the

'825 patent claims a narrower requirement than its parent, and Dr. Valenti cannot now seek to

rewrite the claims in order to find infringement. *See Imaginal Systematic*, 805 F.3d at 1110; *Al-Site

Corp. v. VSI Int'l, Inc.*, 174 F. 3d 1308, 1322-23 (Fed. Cir. 1999) (holding that "[t]he specific

limitations added to gain allowance of [a parent] patent are not included in and are therefore not

relevant to determining the scope of the claims of the later issued patents").

Dr. Valenti's infringement opinion with respect to "without checking a downlink channel" is

based on this erroneous claim construction. He points to a portion of the LTE standard that states

that "the UE shall monitor the PDCCH for Random Access Response(s) identified by the RA-RNTI .

. . in the RA Response window." Ex. 23, Valenti Infr. Rpt. ¶ 459 (quoting TS 36.321 at §5.1.4). In

Dr. Valenti's view, this means that the LTE standard does not monitor the PDCCH (the "downlink

channel") for "Random Access Responses(s)" prior to the start of that window. Ex. 23, Valenti Infr.

Rpt. ¶459. Dr. Valenti relies exclusively on his claim construction argument that the "downlink

channel" is not monitored for random access responses, *i.e.*, a specific message. *See, e.g.*, Ex. 23,

Valenti Infr. Rpt. ¶¶470, 483. During his deposition, he conceded that while the UE "may or may

not be looking" for PDCCH paging notifications (i.e., messages besides random access responses)

during the predetermined delay duration, under his interpretation of the claims, "[t]hat determination

is kind of outside the scope of . . . the claim here." Ex. 24, Valenti Dep. 90:6-24. Because Dr.

1   Valenti's infringement allegations regarding "waiting . . . without checking a downlink channel"

2   rely on an implicit and erroneous claim construction, they, and paragraphs 457-487 of his opening

3   infringement report, should be excluded.

4   Dr. Valenti's construction of the phrase "without checking a downlink channel," is contrary

5   to the intrinsic record and the proper construction of this term. The Court should therefore preclude

6   Dr. Valenti from presenting this unreliable and irrelevant argument at trial, and should strike

7   paragraphs 457-487 of Dr. Valenti's infringement expert report concerning the '825 patent.

8   **H.   Samsung's '726 patent**

9   **1.   Dr. Bambos's Opinions Based on an Improper Construction of
                            "associating a HARQ process with the calculated HARQ process ID"**

10   **Should Be Excluded.**

11   The '726 patent relates to voice services provided by Voice over Internet Protocol (VoIP)

12   techniques, which "utilize persistent resource allocation to avoid the burden of transmitting resource

13   allocation information for all of the VoIP packets of information." Ex. 12, Bambos Infr. Rpt. ¶ 181;

14   *see* Ex. 28, '726 patent at 1:38-51. A value called a HARQ process ID is calculated by the UE to aid

15   in error correction. *See* Ex. 28, '726 patent at 1:61-2:60, Figs. 1, 4.

16   Specifically, asserted claims 11 and 13 of the '726 patent require "associating a HARQ

17   process with the calculated HARQ process ID." Samsung's expert on the '726 patent, Dr. Bambos,

18   fails to apply the correct construction of this term in his infringement analysis, instead applying a

19   claim construction that reads out this claim element altogether. Consequently, his opinions regarding

20   the "associating a HARQ process with the calculated HARQ process ID" claim limitation, and any

21   corresponding opinions related to this claim term, should be stricken from his infringement report.

22   *See* Ex. 12, Bambos Infr. Report ¶¶ 837, 847, 855.

23   In its Patent L.R. 4-3 disclosures, Samsung took the position that the term needs no

24   construction. However, it has become clear that Dr. Bambos' interpretation of the "plain and

25   ordinary meaning" of the term effectively reads the limitation out of claim 11.[7] The correct

26   construction of the claim, based on the intrinsic evidence, is "mapping a HARQ process with a

27   calculated HARQ process ID index." The "associating" claim element must have meaning.

28   _____
     [7] Claim 13 depends from claim 11.

1   Claim 11 requires both a "controller that calculates a HARQ process IDentifier (ID)" using

2   three parameters i, n, and t, and "associating a HARQ process with the calculated HARQ process

3   ID." '726 patent 19:16-21. As confirmed by the inventors of the '726 patent, the Second

4   Embodiment of the specification provides the written support for the apparatus claimed in claim 11.

5   Ex. 29, Ju-Ho Lee Dep. (Sept. 27, 2017) 21:20-22:9, 68:8-16; Ex. 25, Kim Dep. 186:24-188:4;

6   Ex. 28, '726 patent at 7:54-10:62. In columns 8 and 9, the specification explains that a HARQ

7   process index can be calculated using three parameters, the persistent resource allocation interval i,

8   the number of persistent resource-dedicated HARQ processes n, and the time information t. Ex. 28,

9   '726 patent 8:55-9:18.

10   The specification proceeds to describe how the HARQ processes x_1 to x_n can be "mapped" to

11   the calculated HARQ process indexes 1 to n. Ex. 28, '726 patent at 9:19-30. Equation (4) of the

12   patent shows an explicit example of the association between the calculated indexes 0, 1, and 2, and

13   the HARQ processes 1, 3, and 7. Ex. 28, '726 patent at 10:9-13.[8] According to the specification,

14   Equation (4) discloses the "mapping information between the persistent resource-dedicated HARQ

15   process identifier indexes and the HARQ process identifiers." Ex. 28, '726 patent 10:5-8.

16   Therefore, the Second Embodiment—the only disclosed embodiment of the '726 patent that

17   practices the claims, *see* Ex. 30, Bambos Rebuttal Rpt. ¶ 414—discloses how a HARQ process

18   index[9] can be calculated and subsequently associated to a HARQ process in Equation (4), exactly

19   paralleling the "calculating" and "associating" steps of claim 11. *See generally* '726 patent, 9:5-

20   10:19. Accordingly, under a proper construction of the "associating" term in claim 11 that is

21   consistent with the plain language of the claim and the only relevant disclosures in the patent

22   specification, "associating a HARQ process with the calculated HARQ process ID" requires some

23   form of deterministic mapping.

24   Not only does Dr. Bambos fail to apply the correct construction of the "associating" claim

25   element, but his infringement opinions read out this claim element. In his infringement analysis of

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[8] The '726 patent specification does not use the term "associating" outside of generic regurgitations of claim language.

[9] The parties dispute whether Equation (2) of the '726 patent represents a "calculation," though both parties agree that Equation (3) performs a calculation of a HARQ process identifier index. Ex. 30, Bambos Rebuttal Report ¶ 425.

1   accused Huawei products ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

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4   ▓▓▓▓▓▓   Ex. 12, Bambos Infr. Rpt. ¶ 847 ▓▓▓▓▓▓▓▓▓▓▓▓▓▓

5   ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

6   ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓   Dr. Bambos's infringement theory regarding

7   accused Huawei products ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

8   ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓   Ex. 12, Bambos

9   Infr. Rpt. ¶ 855 ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

10 ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓

11 ▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓▓   Neither of his analyses applies a proper

12 construction of "associating," and Dr. Bambos takes the position that performing a calculation alone

13 also satisfies the "associating" step, without actually showing any association. Ex. 12, Bambos Infr.

14 Rpt. ¶ 265 ("When the 'associating' term is properly interpreted . . . it would include calculating the

15 ID directly using i, n, and t."). Accordingly, Dr. Bambos's interpretation of "associating a HARQ

16 process with the calculated HARQ process ID" cannot be right. *See, e.g.*, *Cat Tech LLC v.*

17 *TubeMaster, Inc.*, 528 F.3d 871, 885 (Fed. Cir. 2008) (refusing to adopt claim construction that

18 would "render[] an important claim limitation . . . functionally meaningless").

19   Paragraphs 837, 847, and 855 of Dr. Bambos' report, and any opinions related to this claim

20 term, should be excluded for relying on an incorrect claim construction. "Associating a HARQ

21 process with the calculated HARQ process ID" requires some affirmative act of deterministically

22 relating the calculated value with a HARQ process. Dr. Bambos's opinions relating to this claim

23 element should be excluded.

24 **IV.   CONCLUSION**

25   For all of the foregoing reasons, Huawei respectfully requests this Court preclude Samsung's

26 experts from offering opinions at trial based on improper claim constructions.

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Respectfully submitted,

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